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(54) Title: PLASMA PROCESSING APPARATUS WITH TUNABLE ELECTRICAL CHARACTERISTIC

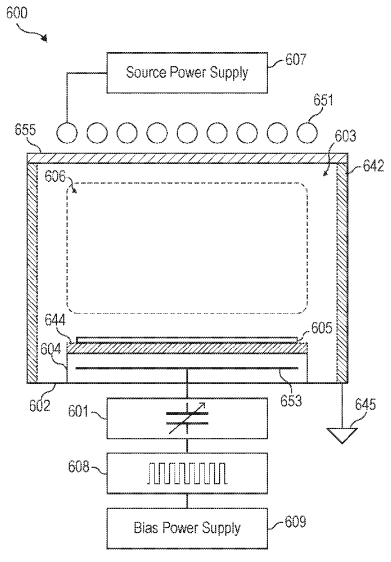


FIG. 6

(57) Abstract: A plasma processing apparatus includes a plasma processing chamber, a source power coupling element configured to generate plasma in an interior of the plasma processing chamber by coupling source power to the plasma processing chamber, a DC pulse generator configured to generate a DC pulse train at a DC pulse frequency, a substrate holder disposed in the interior of the plasma processing chamber, a DC coupling element coupled to the DC pulse generator, a DC current path including the DC coupling element, the plasma, and a reference potential node in a series configuration, the DC coupling element being configured to bias the substrate holder relative to the reference potential node using the DC pulse train, and a capacitive pre-coat layer disposed between the DC coupling element and the plasma. The capacitive pre-coat layer increases the RC time constant of the DC current path according to the DC pulse frequency.

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